REMARKS

At the outset, Applicants wish to thank the Examiner for extending Applicants the courtesy of a telephonic interview, which was conducted on April 23, 2003. Applicants are grateful for the Examiner's suggestions offered during the interview for placing the instant application in condition for allowance. Claims 2-6 were pending. Applicants have amended Claim 6 herein, and added Claim 7, together which now encompass the scope of original Claim 6. This amendment is not intended to cancel any subject matter or otherwise narrow the scope of the claimed invention. The amendment is fully supported by the specification and claims as originally filed, and thus do not constitute new matter.

Claims 2-6 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of U.S. Patent No. 5,278,178 to Hsu ("Hsu") and Soviet Union Patent No. 1687261 to Gembitskii et al. ("SU '261"). Claims 2-6 also stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hsu and SU '261, and further in view of JP 10175809 (JP '809). In connection with the previous response, filed September 26, 2002, Applicants submitted a Declaration Under 37 C.F.R. § 1.132 in which, *inter alia*, the efficacy of the phosphate salt of polyhexamethyleneguanidine ("PHMG") was compared to that of the gluconate salt of PHMG and the hydrochloride salt of polyhexamethylenebiguanidine ("PHMBG"). The results demonstrated that the minimum inhibitory concentration ("MIC") of PHMG phosphate necessary for inhibiting various microorganisms was significantly lower than

either PHMG gluconate (per Hsu + SU '261) or PHMBG hydrochloride (per Hsu + SU '261 + JP '809). The Examiner objected to the results presented in this declaration, however, because the experiments were not performed in presence of isothiazolone. The comparative data were asserted by the Examiner "not [to be] commensurate with the scope of the claimed invention." (instant Office Action at page 5). Although Applicants respectfully disagree with this characterization, new comparison data were prepared per the Examiner's request, and are presented herein.

The new data, presented in the table below, compare in the presence of 3-isothiazolone the efficacy of the phosphate salt of PHMG taught in the present invention to the prior art gluconate salt of PHMG and the hydrochloride salt of PHMBG. An executed Declaration under 37 C.F.R. § 1.132 evidencing the same will follow shortly. Although the Examiner offered that "one of an ordinary skill in the art at the time of the instant invention would have expected the same antimicrobial effect with any salt of polyhexamethylene guanidine, i.e., a hydrochloride or gluconate or phosphate salt," (instant Office Action at page 3), the results indeed show that the phosphate salt of PHMG surprisingly and unexpectedly inhibited the growth of most of the tested bacterial and fungal species more effectively than did the gluconate or hydrochloride salts. In particular, these data support Applicant's original data, as well as the results presented in the September 26, 2002 declaration, which indicated that the surprisingly greater synergy observed in the absence of isothiazolone would be maintained in the

presence of isothiazolone.

Comparison of Minimum Inhibitory Concentration ("MIC") Values Obtained From Biocides Using Phosphate, Hydrochloride, and Gluconate Salts of Polymethyleneguanidine ("PHMG") in the Presence of Isothiazolone ("ITO").

(Unit : ppm)

	ITO + PHMG.H3PO4 (instant invention)	ITO + PHMG.Cl (Hsu + SU '261)	ITO + PHMG.Gluconate (Hsu + SU 261 + JP 809)
Bacillus subtilis	32	32	32
Escherichia coli	64	512	128
Salmonella typhimurium	64	64	64
Pseudomonas aeruginosa	64	64	64
Klebsiella pneumoniae	128	512	512
Proteus vulgaris	32	128	256
Staphylococcus aureus	64	64	64
Candida albicans	32	32	64
Rhizopus oryzae	64	64	64
Aspergillus niger	64	128	128

Applicants also note that these data (and those discussed in the September 26, 2002 declaration) tend to negate any expectation of one skilled in the art that the same antimicrobial effect would be obtainable using any salt of polyhexamethylene guanidine. Specifically, the phosphate salt of PHMG was not equally effective among all tested bacteria or among all tested fungi, and did not universally demonstrate greater synergy than the hydrochloride and gluconate salts, although the phosphate salt surprisingly did show greater synergy in most comparative tests.

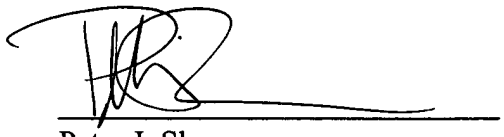
In fact, Hsu itself negates any expectation that the skilled art can predict which combinations would result in synergistic biocidal effect. Employing similar MIC assays used by the inventors, Hsu reported two examples of non-synergistic combinations (*see, e.g.*, Col. 15, line 58 to Col. 16, line 48). In Table 15 of Hsu, no synergistic effect of a combination of biocides was observed. Additionally, in Table 16 of Hsu, an antagonistic effect of the combination, in which a loss of activity of the tested compound in the presence of a known biocidal compound, was observed. Thus, as a whole, these data suggest that the skilled artisan would not expect, and could not predict at the time of filing of the instant application, which particular combinations of compounds would exhibit synergistic biocidal effects. *See also In re Carleton*, 599 F.2d 1021, 1026, 202 U.S.P.Q. 165, 170 (C.C.P.A. 1979) ("Although there is a vast amount of knowledge about general relationships in the chemical arts, chemistry is still largely empirical, and there is often great difficulty in predicting precisely how a given compound will behave.").

Conclusion

Applicants respectfully submit that, in view of the accompanying Request for Continued Examination Under 37 C.F.R. § 1.114, this submission is timely. Therefore, withdrawal of the finality of the Office Action of December 9, 2002, consideration of this Response, and entry of the foregoing remarks into the file history of the above-identified application is respectfully requested.

Applicants believe that the foregoing remarks place the claims in condition for allowance. Accordingly, Applicants respectfully request withdrawal of the outstanding rejections. An allowance is earnestly sought.

Respectfully submitted,



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